

NATIONAL PETROLEUM COUNCIL

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MEETING
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Thursday,
December 17, 1992

The Council met in the Corcoran Ballroom of the Four Seasons Hotel, 2800 Pennsylvania Avenue, N.W., Washington, D.C., at 9:00 a.m., Ray L. Hunt, Chairman, presiding.

PRESENT:

RAY L. HUNT, Chairman
JAMES D. WATKINS, Government Co-Chairman
KENNETH. T. DERR, Vice Chairman
JOE B. FOSTER
FREDERICK E. JOHN
KENNETH L. LAY
MICHAEL G. MORRIS
MARSHALL W. NICHOLS
THE HONORABLE JAMES G. RANDOLPH
THE HONORABLE OLIVER G. RICHARD, III
FRANK H. RICHARDSON
WILLIAM W. SLAUGHTER
LAWRENCE L. SMITH
THE HONORABLE LINDA G. STUNTZ
EUGENE A. TRACY

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P-R-O-C-E-E-D-I-N-G-S

(9:05 a.m.)

CHAIRMAN HUNT: Good morning, ladies and gentlemen. I'd like to call this, the one-hundredth meeting of the National Petroleum Council to order. I'm sure everybody here is bright-eyed and bushy-tailed after being here last night. We have a lot of business to cover today, and I think everyone will find this a very enjoyable and a very, very informative meeting.

Unless there is insurrection from the floor, we will dispense with the calling of the roll. And we have a somewhat unusual head table arrangement. I'm going to introduce in just a minute the individuals to my left.

When we begin the presentation of the gas report, I will introduce the individuals to my right, and then they will introduce the panel which will actually introduce the report in different stages; and then later address various questions at that time.

Starting on my left, your right, I'd like to present Ms. Linda Stuntz, Deputy Secretary of Energy and also the government Co-Chair of the Committee on Refining. And let's hold our applause until I introduce everyone, if I could.

Next to Linda is Marshall Nichols, who is the Executive Director of the National Petroleum Council. And

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1 Marshall has been executive director for 12 years, having
2 been an employee or having worked with the NPC for 20
3 years. And I think that must set some sort of record in
4 this town.

5 Next is Admiral Watkins, Secretary of Energy,
6 who will address us later in the program. And to my
7 immediate left is Ken Derr, the Chairman of the Board and
8 the CEO of Chevron Corporation, Vice-Chairman of the
9 National Petroleum Council and Chairman of the Committee
10 on Refining, as if he doesn't have other things he needs
11 to do.

12 I'd like to present an overview of our agenda.
13 I think everyone has it in front of them. We will first
14 begin with a status report on the Committee on Refining,
15 which will be presented by Ken Derr. We then will have
16 the presentation of the report of the Committee on Natural
17 Gas.

18 After the presentation of the report is made,
19 there will be a motion for its approval and presumably a
20 second. We will then have discussion and then the Council
21 will vote on the report. After that, we'll hear from
22 Admiral Watkins. We then will receive and vote upon a
23 report of the NPC's Finance Committee, who will vote upon
24 the approval of a memorial resolution to Jim Glanville,
25 and then we will entertain any other business that might

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1 come before this meeting.

2 We will then adjourn, and ten minutes after
3 our adjournment, I will say for members of the media there
4 will be a press conference dealing with the gas study.
5 The press conference will occur in this room, and you will
6 have available to you the Chair and Vice-Chairs of the gas
7 study. And we're presuming that that press conference --
8 we've allocated up to 45 minutes for that, so we should be
9 able to cover all the questions, hopefully, that the media
10 might have.

11 I also would like to add that Admiral Watkins
12 is going to have to leave us at 11:15 for a meeting with
13 members of President-Elect Clinton's transition team.

14 Why don't we start our report. The first item
15 is a status report of the Committee on Refining, delivered
16 by its Chairman Ken Derr. Ken?

17 MR. DERR: Thank you, Ray, and good morning to
18 all of you. I'm happy to be here this morning to again
19 report to the Council on the efforts to date of the
20 Committee on Refining.

21 Let me start with a brief reminder to all of
22 you just what the role of the NPC Committee of Refining
23 is. We were formed about two years ago as a result of a
24 request from Secretary Watkins to make a detailed study of
25 the U.S. refining industry in the 1990s. Specifically,

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1 Admiral Watkins asked that the new study focus on the
2 impact of environmental regulation of refineries and on
3 petroleum products.

4 The study has been conducted in two phases.
5 Phase 1 was a quick qualitative look at the ability of our
6 industry to meet the provisions of the Clean Air Act with
7 particular regard to gasoline and diesel fuel. As many of
8 you may recall, the Committee's Phase 1 report was
9 presented and adopted by the NPC at its June 1991 meeting.

10 Phase 2 is a more detailed quantitative
11 analysis addressing a broad range of environmental
12 initiatives and other issues facing the U.S. refining
13 industry.

14 The impact of environmental legislation and
15 regulation on both refinery products and refineries
16 themselves is being addressed. We're evaluating the
17 capability of the industry, both physically and
18 economically, to produce the quantity and quality of
19 products required in the 1990s and beyond.

20 The work on Phase 2 of our study has been
21 proceeding at an intense pace, and I am pleased to report
22 that finally the end is, in fact, in sight. The study's
23 coordinating subcommittee and its four task groups have
24 been meeting almost monthly, with numerous subgroup
25 meetings in between.

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1 A copy of the Committee's progress report is
2 in your packets this morning. Therefore, I'll give you
3 only a brief description of the study's various working
4 groups and what they're doing.

5 The coordinating subcommittee, chaired by Jack
6 Matkin of Chevron, has been providing overall coordination
7 and consistency among the various task groups. The
8 subcommittee has developed a detailed list of study issues
9 and assigned task group responsibility. The subcommittee
10 also has been reviewing the key assumptions developed by
11 the individual task groups and the results of their
12 analysis.

13 Some cross-cutting issues, such as alternate
14 transportation fuels and capital availability are being
15 handled by this subcommittee. Additionally, the
16 subcommittee is responsible for coordinating the final
17 draft report for the Committee's review.

18 The Survey Task Group, chaired by Doug Smith
19 of FINA, has surveyed the industry as a service for the
20 other task groups. The survey questionnaire development
21 was a joint effort by all task groups. They constructed
22 a broad survey of the domestic refining industry, covering
23 both production capacity and environmental topics.

24 The survey also covered supply distribution
25 and logistic systems, as well as some foreign product

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1 quality and supply issues. SRI was retained to assist in
2 the questionnaire and to collect, aggregate and protect
3 the confidentiality of the survey results.

4 The response to the survey was outstanding.
5 More than 150 refineries, representing 90 percent of the
6 U.S. refinery capacity replied, providing an excellent
7 data base for our analyses. And we certainly want to
8 thank all the companies represented here who took the
9 time, and it took quite a bit of time, to fill out and
10 send in their survey results. Without the survey results
11 we would have had no data to proceed on.

12 The Refinery Facilities Task Group, chaired by
13 Paul Lashbrooke of Conoco, is charged with assessing the
14 impact of current and future environmental regulation of
15 the refineries themselves. This group, with the help of
16 an expert panel on environmental issues, has developed a
17 detailed list of potential significant regulations
18 affecting our refineries in the categories of air
19 regulations, water and waste regulations, health and
20 safety regulations.

21 Bechtel was retained to develop estimates by
22 refinery size of the investment and operating costs that
23 would result from such regulations. Costs for new process
24 facilities and location cost differentials have also been
25 developed.

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1 The Refinery Facilities Task Group has also
2 essentially finished its assignment, having completed its
3 cost development work and a draft of its section of the
4 report.

5 The Product Quality and Refinery Capability
6 Task Group was chaired by Stan McGowin of Texaco. It's
7 charged with assessing the cost and impact of more
8 stringent product regulation.

9 Turner, Mason has been retained to provide
10 modeling support and analyzing the cost and capability of
11 the domestic refining industry to provide required
12 products under a variety of different product
13 specification assumptions.

14 Pace has been retained as a modeling
15 contractor to generate domestic cost volume curves for use
16 in the supply/demand and logistics data integration
17 modeling efforts. In addition to supervising these
18 contractors, the task group has analyzed a study survey
19 for expected process and capability changes.

20 The Product Quality Task Group is completing
21 its modeling activities and is in the process of drafting
22 its section of the report.

23 Finally, the Supply/Demand and Logistics Task
24 Group is chaired by Bill Finger of Exxon, with the primary
25 assignment to coordinate data integration and to assess

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1 the sources of U.S. product supplies, region by region,
2 including imports under a variety of potential conditions.

3 Bonner & Moore has been retained as a
4 contractor to provide a transportation logistics model for
5 these purposes. Pace also has been retained as a modeling
6 contractor for developing cost volume curves on foreign
7 product supply for input to the Bonner & Moore model.

8 In addition to supervising these contractors,
9 the task group has developed detailed premises and
10 forecasts on a number of items such as transportation
11 costs, oxygenate supply and foreign environmental
12 requirements.

13 As we know all too well, the future in our
14 business is uncertain, including a demand for U.S.
15 petroleum products. Therefore, three analytical
16 foundation cases have been developed using the years 1995,
17 2000, and 2010: first, an increasing demand case from
18 DOE's Energy Information Administration's annual energy
19 outlook. Second, a no-growth demand case, and, last, a
20 declining demand case.

21 The task group is currently evaluating
22 potential domestic refinery utilization and imports under
23 these three cases. Various sensitivity cases will examine
24 the impact of key assumptions. The task group is also in
25 the process of drafting its section of the report.

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1 In summary, much has been accomplished in the
2 last two years. Study issues have been defined, data has
3 been collected, analytical tools and models have been
4 developed, and study analyses are close to completion, and
5 preparation of our proposed final report is well underway.

6 We plan to finish the study's analytical stage
7 by the end of next month. Major findings, conclusions,
8 and recommendations will be developed. We will then
9 describe what we have learned and document the study in a
10 proposed final report for presentation to you at the
11 spring meeting.

12 In closing, I want to thank all of the NPC
13 membership for your tremendous help in conducting this
14 study. Your support in terms of providing people, data,
15 and, of course, money is allowing us to properly respond
16 to the Secretary's request. I believe our report will be
17 of great value to both the industry and the government.

18 Mr. Chairman, that completes my progress
19 report. I'd be happy to take any questions if anyone has
20 any.

21 Thank you very much.

22 CHAIRMAN HUNT: Thank you, Ken. And the
23 Admiral was just commenting as Ken was completing his
24 report that he does not think that any report of this
25 nature has ever been done before, and that the information

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1 resulting from it will be extremely beneficial.

2 We now would like to move to the central item
3 on today's agenda, and that is the report of the Committee
4 on Natural Gas. As you all know, this is a study that has
5 been going on for two years. It was initiated by Admiral
6 Watkins, and his foresight and his ability to anticipate
7 what would really be timely a couple of years down the
8 road is quite evident by the attention that is being
9 focused on this report.

10 It has involved approximately one-third of the
11 membership, either your direct involvement or the
12 involvement of employees associated with your companies.
13 And the process by which the report has been compiled is
14 very impressive and, in fact, remarkable.

15 On November 16, a six-volume draft of the
16 report was mailed to each of you. I am sure you noticed
17 it when it arrived in your in-box. It was accompanied by
18 a request that if you had any questions or comments that
19 you return those to the NPC offices prior to today's
20 meeting.

21 Additionally, there is an executive summary of
22 that report in front of each of you and we invite you to
23 refer to that as the report is made, if you wish.

24 I'd like to comment again on the methodology
25 which will be used in the presentation of this report.

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1 First, Frank Richardson, the Chairman of the Committee on
2 Natural Gas, and the coordinating subcommittee, which is
3 seated to the left of the second podium, will present the
4 report in various stages.

5 When the presentation is completed, there will
6 be a formal motion made to adopt the report. Considering
7 that at least a third of you were involved in it, I
8 presume there will be a second. Then we will have
9 discussion and I'll turn the program back over to Frank
10 and the vice-chairman of the report, seated on my right,
11 who will pose questions and comments which have been
12 received from the membership, as well as questions and
13 comments of their own to the panel.

14 Following that, or as a part of that, there
15 will also be a question and answer session, taking
16 questions from the floor from both NPC members and the
17 public.

18 I would again remind members of the media that
19 there will be a press conference at the conclusion of this
20 meeting.

21 I'd like to make a couple of personal
22 observations. First, it's obvious that a two-year, six-
23 volume report cannot be effectively edited by a committee
24 of 100. And, second, I am sure there is not a member here
25 today who would not have phrased some paragraph

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1 differently or redirected the emphasis of one section or
2 another section of the report.

3 The challenge in front of us today, however,
4 is to review the report in its entirety and, first, to
5 determine whether or not the Council is in agreement with
6 the report as a whole.

7 Secondly, to determine whether the report is
8 responsive to the Secretary's request; and, third, and
9 most importantly, to determine whether in the judgment of
10 each individual member of the Council this report contains
11 the best advice that the Council has to offer.

12 I would now like to begin the presentation by
13 introducing the individuals on my right who served as
14 chairs and vice-chairs of the study committee. And,
15 again, would you hold your applause until I introduce all
16 four of them.

17 First, on my right is Frank Richardson, the
18 President and CEO of Shell Oil Company who served as
19 Chairman of the Committee on Natural Gas. Seated next to
20 him is Jim Randolph, Assistant Secretary of DOE,
21 responsible for Fossil Energy. He served as the
22 government co-chair of the Committee on Natural Gas.

23 Seated next to him is Ken Lay, Chairman and
24 CEO of Enron, who served as Vice Chairman-Transmission for
25 the Committee on Natural Gas. And seated next to Ken is

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1 Gene Tracy, the immediate past Chairman of the Executive
2 Committee of People's Energy Corporation, who served as
3 Vice President-Distribution of the Committee.

4 Let's give all these individuals a round of
5 applause.

6 Frank Richardson will introduce in a moment
7 the members of the coordinating subcommittee who are
8 seated to my left on the other side of that podium. And
9 with that, I would now like to turn the program over to my
10 friend and a man who has done a fantastic job chairing
11 this committee, Frank Richardson. Frank?

12 MR. RICHARDSON: Thank you very much, Ray.
13 And I'd like to start off by saying I appreciate very much
14 -- I know I'm speaking for the Chairman's team here on my
15 right, and we all appreciate very much the really
16 constructive relationship that has existed over the last
17 18 months to two years, as this study team has really
18 gotten in action.

19 Much has been said, often been said about the
20 adversarial relationships that sometimes exist in the
21 various segments that are reflected in this study, a real
22 reservoir to burner tip study. But I think I'm speaking
23 for the rest of the Chairman's team here in saying that
24 what we witnessed is really effective working together,
25 people talking to each other, but more importantly,

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1 listening to each other. And I think what we have is a
2 product that's good, not only for our total industry but
3 also good for our country.

4 I think I'm speaking for the things that all
5 of us heard many times in sitting through the working
6 sessions, that the process that is involved in this report
7 with all these people working together, representing the
8 total segment of the industry, is probably, as far as
9 long-term benefit, as important as the benefit of the
10 output of the study.

11 Well, as Ray said, you all know from your
12 November mailing that there is a tremendous amount of
13 material and data in the study that we're bringing forward
14 for your consideration today. We thought long and hard
15 about what we do today to effectively present it and allow
16 you to consider it.

17 And what we thought, as Ray has indicated, is
18 that we would let representatives of the coordinating
19 subcommittee, which is headed up by Larry Smith, really
20 present the fundamental thrust, the messages, so to speak,
21 of this study in a crisp format this morning. And then we
22 would later get into questions and comments.

23 So to present our main messages this morning,
24 we have from your right to left Fred John from Southern
25 California Gas; Rick Richard, New Jersey Resources; Bill

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1 Slaughter of Panhandle Eastern; Mike Morris, Consumers
2 Power Company; and Joe Foster of Newfield Exploration; and
3 then Larry Smith, who is the Chairman of the Coordinating
4 Subcommittee. Larry is from Shell Oil Company.

5 And we'll begin the program of the messages
6 with Larry's overview. So, Larry, I'll turn it over to
7 you.

8 MR. SMITH: Thank you, Frank. Good morning.

9 The NPC Study on Natural Gas was conducted in
10 response to a request from Secretary Watkins. The Admiral
11 requested a comprehensive analysis of the potential for
12 natural gas to make a larger contribution to our nation's
13 energy supply and environmental goals, to consider the
14 potential barriers that could impede the deliverability of
15 gas to the most economic, efficient, and environmentally
16 sound end uses.

17 We are pleased to report that natural gas has
18 the potential to make a significantly larger contribution,
19 both in the nation's energy supply and its environmental
20 goals. Achieving that potential will require positive
21 actions by both industry and federal, state, and local
22 officials.

23 For the past 20 months, over 200 contributors
24 have examined the U.S. natural gas industry from the
25 reservoir to the burner tip. The study team included

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1 representatives from all segments of the natural gas
2 industry, as well as end users and federal and state
3 regulators. Over 30 person-years of effort was required.

4 Additionally, NPC direct costs totaled about
5 1.6 million dollars. The indirect costs were
6 conservatively estimated at least ten times that much. So
7 a very, very significant effort on the part of industry.

8 The coordinating subcommittee formed four
9 major task groups, namely source and supply, demand and
10 distribution, transmission and storage, and regulatory and
11 policy issues. The task groups then formed several
12 specialist subgroups to examine specific issues.

13 The subcommittee formally met 19 times to
14 ensure proper integration of the task group efforts. Many
15 of these meetings were multi-day meetings. The task group
16 chairs are Walter Piontek from Mobil, source and supply;
17 Mike Morris of Consumers Power, demand and distribution;
18 Bill Smith, Sonat, transmission and storage; and Rick
19 Richard, New Jersey Resources, regulatory and policy
20 issues.

21 I'd be remiss if I didn't give some credit to
22 the task group chair assistants: Robert Brown with Mobil;
23 Charlie Belknap with Consumers Power; Steve Voorhees with
24 Sonat; and Steve Harvey with Enron; and, also, some
25 special recognition to Al Vennix from Shell. Among other

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1 things, Al crafted the executive summary.

2 Also, this morning's subcommittee panelists
3 are identified on the slide, a box around their name.

4 The principal focus of the four task groups
5 was as follows. For source and supply, define the
6 domestic resource base and examine import and export
7 opportunities; for demand and distribution, examine and
8 define market opportunities and constraints in all sectors
9 and analyze by ten domestic regions; transmission and
10 storage, analyze the capabilities of the existing system
11 and determine the need for system revisions with changing
12 supplies and markets; and for regulatory and policy
13 issues, examine how the regulatory environment affects the
14 operations of the industry and develop appropriate policy
15 and regulatory recommendations at the federal, state, and
16 local levels.

17 Constraints to the use of natural gas were
18 identified by study participants. But very importantly,
19 we also conducted an extensive consultant-led focus group
20 study which included some 15 industry, regulator,
21 customer, and manufacturer groups. And very importantly,
22 customer. We really made a very strong attempt to listen
23 to the customer.

24 Today our panel will present significant
25 results of the study, including both study findings and

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1 recommendations. I will highlight the four key findings
2 and the two general categories of recommendations in my
3 introduction.

4 The first key finding is natural gas is an
5 abundant domestic resource and can be produced and
6 delivered at prices that allow expansion of the market and
7 continued development of the resource. Development of the
8 resource will require sustained real growth in prices, but
9 at price levels that should enable gas to compete with
10 alternative fuel choices.

11 The second finding is the natural gas market
12 is increasingly diverse with new challenges and
13 opportunities. Natural gas has potential for growth
14 opportunities but will face substantial challenges from
15 other traditional fuel sources, as well as improved energy
16 efficiencies and conservation.

17 The third finding is increased reliance on
18 competitive market forces has improved the industry's
19 ability to serve customer needs in a diverse and expanding
20 marketplace. However, in the deregulation transition,
21 significant challenges to the industry of both potential
22 gas supply and price volatility are apparent.

23 The fourth finding is the gas industry faces
24 significant challenges requiring proactive steps by both
25 industry and government.

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1 The two general categories of recommendations
2 are, first, federal, state, and local officials need to
3 allow competitive market forces to continue to develop and
4 work. Let the market work. And, secondly, industry needs
5 to make the market work.

6 Now our panelists will discuss the background
7 and support for these study findings and recommendations.
8 Our first panelist is Joe Foster, and Joe's theme is
9 supply can be competitively available.

10 MR. FOSTER: My job is to discuss the first
11 key finding which is shown on this slide and to emphasize
12 that this supply is going to be available over the longer
13 term at competitive prices.

14 I was not a worker on this study, per se, in
15 that I certainly did not crunch any numbers or supply very
16 much data, but I did attend most of the coordinating
17 subcommittee meetings. I attended a number of the task
18 force meetings, and I can testify to you today that some
19 quality work was done in this effort and that a great deal
20 of work was done by a great number of people, and that the
21 results of this study should have a great deal of
22 credibility with you.

23 I would have to say that I entered the supply
24 side of this study with a bit of skepticism. Perhaps it
25 was borne out of associating for a long time with

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1 producers which have been saying for ten years that the
2 gas bubble is going to be over next winter.

3 But I came out of this study with the feeling
4 that we have the basis in these supply findings for sort
5 of a paradigm shift in thinking about this industry; that
6 there really are adequate supplies to count on this
7 industry being able to be a market-driven or a market-
8 based industry; that there's no reason that we'll have to
9 race and supply or to pro rate demand; and that these
10 things hold true over the longer term, that we can be the
11 market-driven industry that we talk about being.

12 The first key conclusion of the supply task
13 force was what the resource base is in the lower 48 and it
14 is summarized on this slide. As you can see, it's a
15 resource estimate of about 1300 trillion cubic feet. Each
16 one of those line items was thoroughly researched and
17 documented by, as I said, a great number of people, and I
18 was very impressed with the work that was done.

19 The results were not greatly different than a
20 study made two or three years earlier in the DOE. This
21 was approached differently, independently by different
22 people, and it's encouraging that the conclusions as to
23 the amount of supply is very similar.

24 Even if we're a little bit off on that 1300
25 trillion cubic feet, these numbers are large enough to

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1 support a market-driven industry.

2 And this slide shows other potential supply
3 sources. Imports from Canada can certainly play a large
4 role. Mexico is a potential source of imports at some
5 time in the future. We've talked about LNG as a
6 possibility, although it does not play much role in these
7 projections. And we don't have any gas coming in from
8 Alaska during the period of these projections.

9 But these are sources in addition to the 1300
10 trillion cubic feet of domestic supplies in the lower 48.
11 And they simply reinforce the notion that we do have a
12 vast resource base with which to work.

13 This slide is designed to show that the
14 resource base we're talking about is not static, that it
15 changes with time, it changes with technology, and it
16 changes with economics. Just as in the past, we will in
17 the future continue to convert proved reserves to
18 cumulative production and we'll move assessed resources
19 into proved reserves, and we will add resources through
20 the years with improvements in technology and
21 productivity.

22 For these things to happen, however, it takes
23 activity and expenditures by this industry. We'll have to
24 drill more wells, we'll have to drill deeper wells, we'll
25 have to explore tight sands and deeper water resources

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1 offshore.

2 Whereas in the past, recent past, we've been
3 spending 30 to 40 billion dollars a year as an industry in
4 the making of supply additions, it will require
5 expenditures in the 45 to 50 billion dollars per year in
6 the decade of the '90s. And as we get past the year 2000
7 it will require expenditures in excess of 50, perhaps as
8 much as 60 billion dollars per year.

9 And I think it's fair to say that in order to
10 attract the capital necessary to do these things, there's
11 a likelihood that well head prices will have to increase.
12 But this will be within the context that gas can continue
13 to be competitively priced with alternate fuel sources.

14 This is some data that comes from a very
15 comprehensive modeling effort that was undertaken by the
16 task force. A great deal of detail is shown in the
17 report. And if you're interested in the detail I would
18 encourage you to look there.

19 But some conclusions that come from this slide
20 are that we simply cannot sustain current production for
21 very much longer at \$1.50 per million btu price at the
22 well head. It says that we can get up to 20 trillion
23 cubic feet of supplies with \$2.50 per million btu price.
24 To get to 25 trillion cubic feet per year or quadrillion
25 btu's, if you please, we need prices of about \$3.50 in the

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1 longer term, in 1990 dollars.

2 When I make this point about those prices, if
3 they catch your ear, that \$3.50 price projected for the
4 year 2010 still is only 72 percent of the crude oil -- btu
5 equivalent of the crude oil price in that year. And in a
6 sensitivity case we ran where we showed lower energy
7 growth and flat real oil prices at \$20 per barrel, the gas
8 prices reached only \$2.74 per million btu's in the year
9 2010, and that was 80 percent of the crude oil equivalent
10 price.

11 So we do believe that natural gas can be
12 competitive with alternative fuel sources over the longer
13 term.

14 These price projections, by the way, compare
15 with some in the four to six million dollars per btu range
16 made several years ago by DOE and DRI. So we do believe
17 that we've done -- that this task force has refined these
18 cost estimates.

19 And there's some reason for optimism. If we
20 can simply do 25 percent better than we've done in the
21 past in terms of technology and productivity improvements,
22 those prices can come down 50 cents per million btu's 20
23 years out.

24 The other side of the coin, however, is that
25 if there are more severe environmental restraints than we

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1 presently have, if, for example, the provisions of RCRA
2 require extensive environmental modifications, it could
3 increase prices by 50 cents per million btu's and it could
4 reduce demand by two trillion cubic feet by the year 2010.

5 In addition to examining the supply capability
6 of this country, it was important to analyze the ability
7 to get the supplies to the markets where they would be
8 needed. And a very, very thorough study of our
9 transmission and storage system was made, and the
10 conclusion was that the infrastructure does exist to get
11 gas to market.

12 This slide shows over 280,000 miles of
13 transmission line presently exist, and this system has the
14 capacity to get over 24 trillion cubic feet of gas to
15 market, certainly more than the existing demand. And as
16 Bill Slaughter will show subsequently, it can be expanded
17 readily to meet growing market needs.

18 And the eight trillion cubic feet of storage
19 capacity that goes along with the transmission system
20 provides this country with about 120 billion cubic feet
21 per day of peak day capacity, as compared to about 100
22 billion cubic feet per day of peak day demand in 1991.

23 And, again, there are possibilities for
24 improvements in storage and transmission. A two percent
25 per year improvement in productivity could reduce

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1 delivered costs by 17 cents per million btu's during the
2 period of these projections.

3 The principal need identified in the
4 transmission section of the study or sector was that there
5 be more emphasis on reliability. That will be discussed
6 in more detail by Fred John.

7 In connection with reliability, I would simply
8 say that on the producing side one of the aspects
9 affecting the liability is price volatility. We certainly
10 talked a lot about that in our study and we concluded that
11 there will continue to be volatility in prices as we move
12 from being a more regulated industry to a less regulated
13 industry.

14 We believe that volatility can be managed
15 through the optimum use of storage, through diversified
16 contracts, through the use of forward markets, and other
17 financial instruments. And we also would point out that
18 the residential consumer is least affected by this price
19 volatility, and the other user segments have access to
20 those same kinds of tools to manage price volatility.

21 I would be remiss in talking about this
22 section of the report, this finding, if I didn't
23 acknowledge the good work of Robert Brown and Steve
24 Voorhees who led the task forces that did the work that
25 led to these conclusions.

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1 The next panelist is Mike Morris.

2 MR. MORRIS: Thank you, Joe.

3 We were involved in doing the demand and
4 distribution subcommittee work, with lots of help and
5 assistance from many representatives of the LDC community,
6 government associations and trade associations throughout
7 the United States.

8 And I, like other of the task chairs, would be
9 remiss if I didn't thank Diane Lique from the Department
10 of Energy who was my government co-chair, and of, course,
11 Charlie Belknap from Consumers Power who did most of the
12 work.

13 But I'll stand here today, anyway, and try and
14 lay these facts out for you.

15 Our finding as laid out by Larry for you is
16 simply stated here on the chart. What I'm going to try to
17 do today -- and, Frank, I'll do this as crisply as I can -
18 - is lay out five challenges that we identified in the
19 demand distribution task force group, identify the
20 opportunities that we see in those challenges and then
21 make some recommendations about what we should do as an
22 industry to attack this market as aggressively as we can.

23 I think when you look at the depth and breadth
24 of the study you will see that the high case goes to 25
25 trillion feet in the year 2010; the low case, 21 trillion

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1 cubic feet in the year 2010. And, clearly, I think it's
2 incumbent upon all of us to collectively go after that
3 market opportunity.

4 The first challenge is laid out for you here.
5 And it says something that we actually -- as we got into
6 the study became very clear to us, and that is, even
7 though there are tremendous new markets that we need to
8 pursue, we as an industry need to make certain that we
9 don't lose sight of the core residential, industrial,
10 commercial market that we have served traditionally over
11 the years.

12 We want to make sure that we do that, and
13 this slide will tell you why. You can see that in 1991,
14 14-1/2 trillion feet in this more traditional marketplace,
15 and in the 2010 time frame we can either gain as much as
16 2.8 trillion feet in this particular market segment or
17 lose as much as .6 of a trillion cubic feet. So I think
18 it's quite clear that we don't want to lose sight of this
19 core market.

20 If you look at the residential load and you
21 think in traditional terms about space wire, cooking and
22 clothes drying, we always talk about saturation levels in
23 the distribution end of the gas business. And I, like
24 every other LDC, would report to you that our saturation
25 levels are in the 90-plus percent range.

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1 But somebody has some bad figures because,
2 statistically, space heating, natural gas has a nationwide
3 penetration of only 55 percent. In water heating, only 53
4 percent of the market; in cooking, 41 percent of the
5 market; and in clothes drying on the order of 54 percent
6 of the market.

7 And what this tells me is the opportunity is
8 for us to increase our market penetration in these
9 segments. And, therefore, the overall recommendation of
10 this first challenge is let's not lose sight of the market
11 that is collectively right there under our noses.

12 The second challenge that we identified was,
13 in fact, that we must aggressively go after market
14 opportunities. And those market opportunities were
15 identified as two very significant potentials, the first
16 being the electric generation market where today we enjoy
17 2.8 trillion feet of that market.

18 In the high case we predict 5.4; low case,
19 4.9; and, of course, natural gas vehicles, today less than
20 one billion cubic feet. On our high case, .6 of a
21 trillion; on our low case, .1 of a trillion. So you can
22 see that we have some real opportunity in front of us
23 here.

24 On the vehicle side of things, we're talking
25 about very reasonable levels of penetration. About 25

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1 percent of the overall fleet market, 25 percent of the
2 urban bus market, ten percent of the required California
3 new emission vehicle market, and about 50 percent of the
4 school bus market, which is one that we think lends itself
5 very easily to this kind of penetration.

6 And I think when we attack these markets we
7 need to understand and spend time trying to get a better
8 feel for what it is that these customers are concerned
9 about, and particularly so in the EG market place. And I
10 think this slide will lay out for you -- and it is not a
11 mistake.

12 The election generation market, of which of
13 course Consumers Power is a combination utility and very
14 much involved in this business, is interested first and
15 foremost in price. It's interested secondly in price, and
16 then reliability, flexibility, contract sanctity and
17 security, in that listing.

18 And I think that every one of us in this room
19 is more than capable of attacking the marketplace and
20 meeting the competition. I assure you that the
21 competitive fuels have no intention whatsoever of rolling
22 over and letting gas have this marketplace without a
23 fight.

24 Years ago remember that King Coal delivered us
25 quite a blow with a Fuel Use Act. I think that the source

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1 and supply group has made it quite clear that at 25
2 trillion feet we're looking at a 52 reserve-year life
3 index, and at 21 trillion feet we're looking at an excess
4 of 60 years. We don't need to shy away from this market
5 for any reason. And there's no reason that we can't be
6 competitive in delivering these kinds of volumes to that
7 market as well.

8 That leads us to the third challenge, where we
9 collectively have to aggressively pursue the market. As
10 I said, I don't think that any of us should believe for a
11 moment that because natural gas has some intrinsic values
12 that we're all very proud of that that will deliver to us
13 the market at our feet.

14 Clearly, this is something that we're going to
15 have to collectively pursue, particularly in the EG
16 marketplace, particularly at the producer level and at the
17 interstate pipeline level because those are the major
18 sources of supply as new EG facilities are going to be
19 developed. And it's going to be a challenge for all of us
20 to make certain that we are able to meet that competitive
21 marketplace.

22 Many of you in the producer community in the
23 audience are both oil and gas activity driven
24 organizations. You've competed in the oil side of your
25 business, in the liquid side of your business for years.

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1 It's now going to be the challenge to compete in the gas
2 side of your business against these other fuels.

3 So I think one of the things that we have to
4 do, and the recommendation that we've made from the third
5 challenge, is to make certain that we listen to the market
6 rather than tell the market what it is that we need. We
7 must remember they're the buyers, we're the sellers. And
8 until we get those roles well understood in our mind, we
9 won't face the kinds of successes that I know we can have
10 in this market segment.

11 The fourth challenge is that we need to do
12 more to garner a larger share of research development and
13 demonstration dollars for the natural gas industry. I
14 think that a point in fact that we all need to focus in on
15 is that, for instance, the Department of Energy's RD&D
16 budget for 1993 has dedicated 108 million dollars for
17 natural gas, which is only 6-1/2 percent of the budget.

18 By way of comparison, 500 million dollars for
19 clean coal, which is 30 percent of the budget; 210 million
20 dollars for renewables; 203 million dollars for nuclear;
21 326 million dollars for conservation.

22 So our recommendation in this point is that we
23 collectively move toward the government and try and up our
24 ante out of that annual dollars that are available for
25 RD&D on the order of 250 million dollars. So at least we

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1 are, on a percentage basis, comparable to some of the
2 other fuels and some of the other programs.

3 And, lastly, the fifth challenge that we
4 identified in this particular phase of the study is that
5 we need to speak collectively in one solid voice and talk
6 about the positive aspects of this fuel and its potential.

7 We need to make certain that this study that
8 many of us have worked hours and hours and hours on
9 becomes the foundation for which we can go into this
10 marketplace and tell the potential markets, as well as the
11 existing markets, that this industry is here; it's solid,
12 it will be able to compete. We need to convince the AGA
13 and INGAA and the Natural Gas Supply Association, Natural
14 Gas Council, TIPRO and others to see this study for just
15 what it is.

16 The resource base is there, it's strong;
17 these companies are there, they're strong. They're going
18 to be competitive. I assure you that the market is out
19 there and it's up to us to ensure that we realize the
20 benefits that natural gas can bring to the energy business
21 overall.

22 Our next speaker is Bill Slaughter.

23 MR. SLAUGHTER: Thank you, Mike.

24 With Joe outlining that the supply is there
25 and Mike detailing that the market is there, I've been

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1 asked to discuss the third key finding in the report,
2 which reads, "Increased reliance on competitive market
3 forces has improved the gas industry's ability to serve
4 customer needs in a diverse and expanding marketplace."
5 Or to put it more simply, the market can work.

6 Information collected throughout this study
7 confirms that the newly evolving natural gas market works.
8 Being the pipeliner of the panel, I'd first like to touch
9 on some of the findings of the study regarding the market
10 capabilities of the interstate pipeline network.

11 The NPC study describes the existing gas
12 transmission and storage facilities as a valuable asset
13 that plays an integral role in the development of the U.S.
14 energy industry. We currently have an excess of 50
15 billion dollars invested in this asset.

16 While this existing network can support
17 additional throughput, as Joe discussed earlier, the
18 transmission and storage report did determine that
19 additional facilities will be required to adapt to
20 anticipated changes in supply and market patterns.

21 Joe earlier passed on the costs for adding
22 adequate exploration and production to produce additional
23 gas supplies. The storage and transmission group
24 determined that anticipated pipeline expenditures should
25 be in the range of two to 2.6 billion dollars a year to

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1 cover the scenarios which we've studied, which is about in
2 line with what we spent in previous years, as you can tell
3 from the slide there. That's in dollars per year.

4 While the study did determine that growth and
5 profile of the U.S. market will require additions to the
6 interstate systems, it did also determine that the cost of
7 making these changes would continue to keep natural gas
8 prices well in line with other fuel choices.

9 Let's now move on to some further comments on
10 how the market can work. Market forces have been the
11 primary drivers of change ever since the FERC introduced
12 Order 436 in 1985, requiring pipelines to provide open
13 access transportation. With some of the regulatory
14 barriers removed, this slide indicates the effect of
15 market forces on pipeline sales.

16 In the early 1980s before Order 436, sales
17 were at about 98 percent by the pipeline of our total
18 throughput. By 1991, market forces had driven this number
19 to about 16 percent of total throughput. The subsequent
20 increase in competition from these forces at work has
21 resulted in lower delivered gas prices, increased
22 availability of supply, and new service options for
23 consumers.

24 The industry now faces perhaps one of the
25 final phases of deregulation with Order 636, and I expect

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1 the trend to a more market driven environment to continue,
2 and we'll see even further changes. It was a strong
3 conclusion of the panel that market forces and competition
4 will continue to shape our future and better serve all
5 sectors of the industry.

6 The study also found that there are new value
7 added services being offered by the industry and it really
8 confirmed the new competitiveness of the new markets.
9 Focus group results also indicated that customer needs in
10 today's markets have changed dramatically, and
11 particularly these needs vary quite a bit from customer to
12 customer. Today's service requirements are much more
13 segmented and unbundled and very much tailored to fit
14 individual roles, new services in terms of duration,
15 service levels, and contract terms.

16 While the new obvious unbundled services
17 include storage, gathering, and peak day service, I think
18 we'll see many more new ones very quickly, things like
19 that information management, capacity management, and risk
20 management, just to name a few. There will be many, many
21 more and we hope to see greater flexibility for producers,
22 pipelines, LDCs and end users to enter into negotiated
23 agreements which we're able to provide these services.

24 I'd like to reiterate these points using this
25 slide which indicates the simplicity of our industry.

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1 I'll call it the historical gas industry. In this case,
2 industry is anything before 1985.

3 At that time industry participants were
4 clearly defined: producers, pipelines and LDCs. The
5 services which are listed under each were very clearly
6 defined also. The regulatory system played a distinct
7 role in industry activity and matched well with this
8 industry structure.

9 Today, and I apologize for those of you at the
10 back, but the picture is far more different. Participants
11 have evolved into many types of companies with different
12 relationships between them, as indicated by the more
13 matrix type dotted lines.

14 The services that each participant offer vary,
15 some focusing on their traditional services, but many more
16 venturing into some of the new services which I mentioned
17 earlier.

18 Also, the regulatory structure has evolved as
19 well, with Order 636 providing that final evolution. As
20 the previous structure was not designed for today's market
21 environment, it is the view of the study that the FERC
22 should allow market forces to continue to shape the
23 industry, and also as indicated on the slide, state
24 commissions will take a more active role in the industry.

25 This structure really does better suit today's

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1 environment. Indeed, if you are making a decision today
2 to try and create the old regulatory and market
3 environment, it would be very, very difficult, and
4 probably just wouldn't work. Or as I think I heard Rick
5 Richard say once, the eggs have been scrambled.

6 These evolving market forces have also caused
7 concerns for some regarding reliability. With so many
8 different players and diverse services, it is not
9 surprising that the business of moving gas is not as
10 simple as it once was. Reliability in the new environment
11 is a complex issue and I feel personally that the NPC team
12 did an outstanding job of framing the issue. It's far
13 different today for this environment than it was for the
14 historical natural gas market.

15 The study summarizes the reliability issues as
16 operational, contractual, regulatory, and perceptual. The
17 study concludes that we all should give consideration to
18 the formation of a natural gas reliability council and
19 support the ongoing efforts of the Natural Gas Council,
20 INGAA and others.

21 We feel this will result in increased
22 confidence in the reliability of natural gas service and
23 improved coordination in the planning of down times, peak
24 periods, and emergency situations. The study team felt
25 that there was overall benefit to all of us in the

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1 industry from this effort.

2 With these market forces at work, let me turn
3 to a final subject that I'll discuss, which is contracts.
4 Contractual arrangements define that our business
5 relationships need to match the needs of our customers.
6 It is a key recommendation of this study that there be a
7 reduction in regulation to the minimum necessary to
8 support the market's evolution towards contract diversity.

9 The rights of buyers and sellers to match
10 their individual interests and risk preferences is a key
11 to successful market performance. Contract diversity
12 unencumbered by the hindsight of a regulatory intervention
13 will allow buyers and sellers to match their individual
14 needs for price, term, and flexibility.

15 Just to take an example, a customer in our
16 focus group surveys expressed a need to enter into long-
17 term supply contracts. Industry must work together to
18 provide that need.

19 Also, many industry participants are not yet
20 using the opportunities made available to us in the
21 financial markets. LDCs face a unique problem in that
22 state regulators must be convinced that long-term
23 contracts, futures options, and many of the other new
24 diverse arrangements are not gimmicks but viable,
25 important options. And Rick Richard will be discussing

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1 that in more detail in another minute or two.

2 As the industry develops flexible gas
3 contracts, customer needs will be met and they will
4 further gain confidence that natural gas will remain a
5 good energy source for the future.

6 So to close my comments, we believe that there
7 will be fundamental market forces driving our industry.
8 It is the customer and customer needs which will dictate
9 our industry's overall shape. Market forces will drive
10 the development of new innovative services and pricing
11 structures.

12 Our industry environment will further evolve
13 with industry segments while remaining intensely
14 competitive, working together to ensure that the supplies
15 are there and abundant and more flexible. This will lead
16 to market growth.

17 I, personally, believe that much of the
18 industry's revenue in the year 2000 will be generated by
19 products and services that we've even not yet envisioned,
20 and I certainly join with other members of the panel and
21 the study team in being very optimistic about the
22 industry's future, and certainly look forward to being a
23 part of it.

24 So just finishing the comments on the market
25 can work here, I'd like to turn over the discussion to

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1 Rick Richard, who will detail the recommendation that
2 regulators need to let the market work. Rick?

3 MR. RICHARD: Thank you, Bill.

4 I'd like to start out by thanking my very able
5 co-chair, Cliff Tomaszewski from DOE and also Steve Harvey
6 from Enron for all the work that they helped put together
7 on the policy and regulatory group.

8 What I'd like to start out with is mainly the
9 first recommendation, which really is very simple.
10 Federal, state and local officials need to allow
11 competitive market forces continue to develop and work.
12 And I'd like to emphasize the continuation part of that
13 phase because halting regulatory reform is not a solution
14 to what many perceive as current problems of a regulatory
15 uncertainty.

16 Instead, we just shift away from efforts to
17 control markets and towards more assuring adequate
18 information is available to all customers; and, secondly,
19 policing the industry to prevent any possible abuse of
20 market power.

21 The underpinnings of the public interest
22 definition that we currently have then must be reviewed to
23 ensure a regulatory vision, both at the federal and state
24 level, that meshes with using competition in favor of the
25 public interest instead of in spite of the public

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1 interest.

2 So the new paradigm of which Joe mentioned in
3 the overview from the beginning is that the public
4 interest can be very simply defined as it comes to the
5 natural gas business. More and better service choices for
6 educated energy consumers.

7 And what that means is to the extent
8 competition is available, the more and better choices that
9 all the players have from the production side to the
10 burner tip is very important. And if they have the
11 education at the other end to be able to see how the
12 market is working they can make a much more efficient
13 market than what we have now.

14 Simply put, the industry and regulatory group
15 is making the suggestion that people that are regulated
16 should quit trying to focus on what pleases the regulator
17 and instead on what pleases the customer, which is why
18 we're all in the business in the first place.

19 What this leads to is a whole different group
20 of standards from the past to the present, and the ones on
21 the left is the current structure of the industry. And
22 the recommended model that has come out of our report
23 that's detailed in the study itself shows that there are
24 some very dramatic changes from the existing structure.

25 Having let the genie of competition out of the

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1 bottle, the efficiencies of competitive markets will be
2 severely distorted if the overall -- the existing system
3 is not done in a pragmatic and continuous improvement
4 manner.

5 Secondly, the new standards involve tradeoffs
6 between the government's former role in controlling
7 industry and the future role in encouraging the new
8 development of services, of new services.

9 Note that the new standards imply great
10 strides toward further deregulation but deliberately stop
11 short of recommending complete deregulation. And that is
12 a recognition of the fact that there are still natural
13 monopolies that do persist in some sectors precluding
14 direct competition producing an economically efficient
15 outcome. So we're not advocating complete deregulation,
16 only those points where you can deregulate it should be
17 done, and also enlightened regulation for what remains to
18 be regulated.

19 At the same time, if you look at this meshing
20 of the two, you can see that it recognizes the old bundled
21 services of the past is not really a natural monopoly as
22 it once was perceived, and there is really no need for
23 regulation on the federal interstate level on the merchant
24 function.

25 If you take three examples to show you what

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1 the culture change looks like from the left to the right,
2 if you look at the protection midway down the left column,
3 going from protecting people from making decisions, we're
4 looking at more about how these decision makers can have
5 choices, and the risk that goes with that choice is much
6 more important than a cradle to grave protection.

7 Tariffs really is something that when you go
8 into the store to buy bread you don't ask what the tariff
9 is on the bread. It's an anachronism that shows that we
10 haven't really been focusing on the customer, and we
11 should be looking at the development of new products, not
12 the development of new tariffs.

13 And, finally, just to use another example, we
14 need to move away from the idea of penalties as the way to
15 motivate and instead look for incentives as a way to
16 motivate for the future regulatory paradigm.

17 Moving to the specific regulatory
18 recommendations, there's really five categories: fostering
19 choice, improving system efficiencies, reducing regulatory
20 uncertainty, supporting technology development and
21 commercialization, and promoting cost-effective
22 environmental regulation, and reducing access
23 restrictions.

24 Taking fostering choices, the first one, where
25 market forces are sufficiently robust to provide

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1 reasonable service choices, regulation should defer to
2 them. Example, if FERC could eliminate the traditional
3 test for new pipelines, the parties can more adequately
4 contractually allocate the risk through a contractual
5 mechanism.

6 As FERC should continue to promote the
7 development of robust secondary markets and regulated
8 transport service allowing customers, whoever they may be,
9 to trade those capacity rights, state commissions should
10 evaluate and direct, as appropriate, unbundling of local
11 distribution company and perhaps intra-state public
12 services, and looking at much like the model at the
13 federal level.

14 Gas procurement should be deregulated where
15 buyers have equal access to competing gas supplies and the
16 information to make those types of decisions. The
17 benefits of and need for franchise protection for LDC
18 services should be reviewed and reevaluated, and, coupled
19 with that, proper cost allocation should be encouraged by
20 the state regulators to avoid inefficient results at the
21 state level.

22 Finally, on this fostering choice part, there
23 is a potential for oversight of gathering systems in
24 isolated cases where it might be appropriate if there is
25 an abuse of market power that exists.

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1 Secondly, on improving system efficiencies,
2 really denotes that the Commission should consider new
3 forms of incentive rate-making that encourage setting
4 targets for increased efficiencies, improved productivity,
5 and reduce cost.

6 This is more in the nature of prospective
7 incentives, not retroactive penalties, so that everyone
8 knows what the rule of the game is while you're going into
9 the new regime. And much like businesses operate with
10 goals and objectives for the year, regulated companies
11 should be held to those same type of standards and meet
12 those goals that make sense, properly worked out with all
13 parties involved.

14 Cost of service and rate design should be used
15 to avoid cross-subsidies among types of services and
16 classes of customers that do lead to inefficient results
17 in the marketplace.

18 Reducing regulatory uncertainty, customers
19 need current information on access and rates to make long-
20 term decisions, not retroactive rates and different tariff
21 restrictions after the deal is struck so that, thus,
22 regulators should determine rate treatment for new
23 facilities up front rather than after the fact and the
24 deals are done.

25 Rate increases should not have a retrospective

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1 impact. You need to lock in what you think the rates will
2 be up front. Necessary regulatory proceedings should have
3 procedures that guarantee timely completions. At the
4 federal level there really is no timely statutory mandate
5 to finish anything in a specific period. Some states have
6 done that successfully, where they have a time period of
7 which you have to reach a decision.

8 Number four, technology development and
9 commercialization, Mike mentioned this, it's our
10 recommendation that the Federal Government should
11 reexamine its natural gas research development and
12 demonstration effort. And we looked at the number of
13 studies which suggest that 250 million dollars annually
14 would be a legitimate resource expenditure in the Federal
15 Government for that area.

16 Also, what we suggest is to review ways to
17 sponsor cooperative joint research projects with industry
18 participants, and there is a concern that a lot of
19 independent small companies be a part of that process
20 also.

21 Finally, under promoting cost effective
22 environmental regulation and reducing access restrictions,
23 the concern there is that all government agencies should
24 create a balance between cost and benefits in the
25 legislative and regulatory process for environmental and

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1 access issues.

2 Federal regulatory moratoria should be
3 extended for review and modification of the current
4 regulatory and permitting process to ensure a balanced
5 approach, design and implementation of new regulatory
6 requirements. And these revisions should specifically
7 include the net environmental benefits of using natural
8 gas for the public good.

9 Also, we have recommendations that are set
10 out in the paper on how to alleviate or minimize access
11 restrictions which, of course, includes leasing on public
12 lands and reviewing certification of pipelines and other
13 energy delivery systems.

14 The specific recommendations are much more
15 detailed in the report. That's the overview.

16 On a personal note, I'd like to end up that
17 I'm not old enough to be wise. I've realized that over
18 the last few years. But I have been blessed with some
19 very early experiences that I think I learned all through
20 this process by being a federal regulator that helped
21 develop the 4-3-6 type of program; and then had the
22 privilege and honor of running an interstate pipeline
23 early on in my career and implementing some of the
24 theories that we promulgated at FERC, and executing them
25 into actual strategies.

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1 I have found that where competition is allowed
2 to exist and it can be grown, it definitely benefits all
3 the players. And I think we can see that not only in the
4 production side, but the transmission side. And where I
5 am now at a local distribution company side, we can
6 increase the efficiencies, given the opportunity to do
7 that by the regulators. It would be a great boon for the
8 public good.

9 Also, I've said a lot of things about what
10 regulators and policymakers should do. Being a former
11 regulator, it takes two to tango.

12 And so the next person on the panel is Fred
13 John, who will talk about what industry can do to realize
14 the vision that we've set out.

15 Thank you.

16 MR. JOHN: Good morning.

17 The second recommendation basically relates to
18 what industry can do to make it work. If natural gas is
19 to play a more significant role in the U.S. energy mix,
20 the industry must act based on the findings of the report
21 that the previous speakers have referred to.

22 First, the resource base is not limiting.
23 Second, gas supplies can be delivered at competitive
24 prices on a timely and reliable basis. Third,
25 opportunities do exist to increase gas consumption in a

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1 variety of markets. Finally, regulators and other
2 policymakers hopefully are poised to help the competitive
3 natural gas market work.

4 However, there are five key areas where the
5 industry must focus its efforts, and they're on that
6 chart. Reliability, customer orientation and marketing,
7 technology development and commercialization,
8 environmental regulation, and, finally, and I think most
9 importantly, the issue of leadership.

10 As far as reliability is concerned, the
11 industry must address the reliability issue head on if
12 natural gas is to compete effectively in the nation's
13 energy market. The consumers, whether they be
14 residential, commercial, industrial, or electric
15 generation, must be able to make decisions based on
16 economic, service, and environmental requirements with
17 full confidence in the reliability of natural gas being
18 available when, where and under the terms specified by the
19 contracting parties.

20 There was reference to the Natural Gas
21 Reliability Council that the Natural Gas Council is
22 working on, and the report urges the Secretary to support
23 industry efforts to undertake the Natural Gas Reliability
24 Council. But beyond that, each of our companies has an
25 obligation in dealing with our customers to convince them

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1 that the resource is there and can be provided to them on
2 a reliable basis.

3 Which basically leads to the issue of customer
4 orientation and marketing. The industry must be dedicated
5 to being more customer oriented and committed to providing
6 the products and services appropriate to the needs of the
7 individual customer.

8 You've heard previous speakers say listen to
9 the customer. I can't overemphasize that. And I think we
10 in the distribution side of the business have been as
11 guilty as anybody. In our reluctance at times to focus on
12 the needs of the customer, we basically had somewhat of a
13 paternal attitude.

14 I think as we move ahead, and you looked at
15 the charts that Bill Slaughter showed, we have to
16 understand that more and more each segment of the industry
17 is dealing on an individual basis with those customers.
18 So it's no longer the local distribution's responsibility
19 to work with the customer, it's the producers, the
20 marketers, the brokers, the pipeline companies as well.
21 It's a heavy burden, but I think it's one that we can
22 carry forward.

23 On technology development and
24 commercialization, the continued development and
25 commercialization of technology is fundamental to

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1 increasing the supply of gas. We focused primarily this
2 morning on demand, but it's also critical as far as the
3 supply resource base is concerned.

4 It's important as far as maintaining and
5 expanding market opportunities, and it's critical in
6 reducing the delivered cost of gas to make it even more
7 competitive with alternative energy sources.

8 On this point, it's also imperative that the
9 industry use the product and services in our own business
10 application because when a customer says here's a new
11 product, are you using it; if the response is no, he's
12 less likely to take a risk to use it himself.

13 In the area of environmental regulation, it's
14 primarily the need for a cooperative effort between
15 industry and government to define the role of natural gas
16 in a balanced and comprehensive energy conservation,
17 pollution prevention, and energy development program.

18 And the balancing act is important because if
19 natural gas does have environmental benefits at the burner
20 tip, there has to be a recognition by industry and
21 government that the resource has to be produced. And that
22 balancing act is getting more and more difficult to
23 accomplish, but it's imperative that it occur.

24 Finally, in the area of leadership, leaders
25 within all segments of the industry must commit to a

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1 concerted, ongoing and consistent effort that focuses on
2 the unique attributes of natural gas, and the ability of
3 the natural gas industry to deliver superior value to
4 customers.

5 There are four quadrants here as far as
6 leadership is concerned based on the study itself. First
7 is vision. The industry must develop a consistent and
8 coherent vision for the future direction of the natural
9 gas industry. This would be a major step in achieving the
10 appropriate role for gas in the U.S. energy mix.

11 Second, education. The industry must educate
12 ourselves, our customers, our regulators, our policymakers
13 on the facts about natural gas. We need to focus on the
14 facts if we're going to change some of the adverse
15 perceptions.

16 Tied to education, obviously, is
17 communication. We must improve our communications with
18 customers and policymakers to satisfy their objectives.

19 And, finally, I referred to this earlier, the
20 industry must act, and part of acting is walk or talk by
21 using our products and our own applications; for example,
22 natural gas vehicles and gas cooling.

23 Leadership is an important issue because it's
24 a critical ingredient to offset the lack of integration
25 among the various segments of our industry. It's also a

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1 key element in moving the industry away from fighting over
2 a static or shrinking pie, toward expanding the overall
3 size of the pie for the mutual benefit of all.

4 I think a recent ADA study has indicated that
5 we're approaching 20 trillion cubic feet of demand in
6 1992, and we may actually exceed it in 1993. In order to
7 get from 20 to 23 to 25, we have to work more as an
8 industry working together, recognize that there will be
9 instances where the adversary process will play a role,
10 but that can't be the be-all and end-all of what we're
11 doing.

12 And if you look at the focus group results,
13 factions or factiousness was identified by the focus group
14 participants as the most significant problem facing the
15 industry today.

16 I think the work of this study group and the
17 200 or so participants shows that the industry can work
18 together. I think we've got to carry the study on
19 further. I also think the formation of the Natural Gas
20 Council has been a major step in bringing more unity to
21 the industry, but we have to work even harder.

22 If we want natural gas to contribute to the
23 nation's environmental and energy independent goals, we
24 have to do the things that are on that chart. The choice
25 is ours, and I for one believe we are up to the challenge.

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1 Thank you very much.

2 MR. SMITH: I'd like to thank the panel for a
3 very concise, informative presentation.

4 Frank, that concludes the panel presentation.

5 MR. RICHARDSON: Thank you very much, Larry,
6 for the rather crisp, further concentration of the
7 executive overview. I hope that helps the Council in
8 framing any comments and suggestions you have, and gives
9 you a feel, as we've talked about before many times, of
10 the really strong interdisciplinary and multi-segment
11 nature of this study.

12 So I thank you all once again and all of the
13 companies that have produced those 200-odd people that
14 have been working under some pretty trying conditions back
15 home, some of them in producing an effort we're very proud
16 of.

17 I'd also be remiss if I didn't say thank you
18 to Marshall Nichols and John Guy and the NPC staff that
19 helped keep this thing glued together; in addition to Jim
20 Randolph and Don Juckett and the DOE people who
21 participated.

22 Mr. Chairman, we now come to the part of the
23 program where we move the approval of the study. The
24 drill will be we'll move the approval, Ray will ask for a
25 second; we have a few comments from the Chairman, and then

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1 we get to, perhaps, the most important part, if there are
2 any comments or suggestions that you have.

3 So, Mr. Chairman, I would like to, on behalf
4 of the NPC Committee on Natural Gas, move the adoption of
5 the report and all volumes, in addition to the appropriate
6 working papers which are reflected at the back of the
7 volume.

8 CHAIRMAN HUNT: Motion has been made. Is
9 there a second? I hear a second. We now will have
10 discussion.

11 And let me also comment. I misspoke earlier.
12 The Admiral has to leave at 11:00. I don't want to shut
13 down a conversation prematurely. If we can accommodate
14 that, that's fine. If not, we'll take a hiatus, and then
15 the Admiral's comments, and then pick back up.

16 MR. RICHARDSON: Okay. We'll see if we can
17 finish this up. So we have a motion and a second.

18 Before we turn to the questions or comments,
19 I think it might be appropriate if we have from the
20 Chairman's group, and I'd like to lead off, some brief
21 comments from my view as far as the major issues and
22 questions we were dealing with in terms of broad
23 perspective as we went through the study. And this
24 perhaps will short-circuit some of the questions, or
25 answer some of the questions, I should say.

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1 The question that has been coming to us of
2 late, the common question has been, well, there's a
3 general favorable response on the report, but what are we
4 going to do with the report; how are we going to implement
5 the results.

6 And I think it's important to remember,
7 firstly, in considering this, how are we going to
8 implement the report. The first thing we have to remember
9 is that the NPC, its charter is to give advice to the
10 Secretary of Energy. It's not a marketing or lobbying arm
11 of either industry or government.

12 Having said this, certainly we expect that
13 there will be a wide distribution made of the report by
14 both NPC, and I understand the Department of Energy. I
15 think, however, that if the report is going to be useful,
16 and whether it's useful as some of us think it will be,
17 will depend on the credibility that it accrues.

18 But if the report is as useful as we think it
19 will be, I think that it will have to be picked up by the
20 various trade associations, other groups representative of
21 the industry segments that have worked very hard putting
22 the report together.

23 And I think, certainly, that our impression is
24 at this time that this is already happening. I think in
25 pointing to some of the work that the Natural Gas Council

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1 and perhaps the Reliability Council is always doing, we'll
2 pick this up. But the report itself will obviously stand
3 on the kind of credibility we gain over the next few days,
4 months, and years.

5 As far as broader perspectives from my
6 viewpoint -- and I'm going to ask the co-chairmen to
7 briefly comment also as they see fit on this -- as far as
8 the broad perspective from my viewpoint, I think there are
9 a couple of items I would mention.

10 We worked very hard to come to grips with the
11 problem of misusing the report. The report, as you all
12 know, is a very long-term, basic 20 years, with some long-
13 term screening going out to 40 years. It's a long-term,
14 total integrated systems approach to answering the
15 Admiral's question that he asked us two years ago about
16 the potential for natural gas becoming a bigger fraction
17 of the energy supply as far as in the United States.

18 We have used two reference scenarios. They're
19 not necessarily expectations or premises that will come
20 about, but they're reasonable reference scenarios with
21 consistent premises that underpin in a system manner the
22 total study.

23 So an obvious note of caution. And one thing
24 that we've talked a lot about among the leadership of this
25 study and among the people that participated in the study

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1 and among some of the readers is the obvious concern of
2 taking things out of context.

3 It's a massive study, it's a massive amount of
4 data. And an obvious example would be to leave the
5 impression, for instance, that we have 1300 trillion cubic
6 feet of gas out there just waiting to be hooked up; all
7 you have to do is turn the spigot. That's one of the more
8 obvious extreme things we wouldn't want to happen.

9 Having said this, with this long-term system
10 approach, though, as I've mentioned before and really
11 comes out from some of the things you've said here is an
12 obvious plus. It has obvious vulnerabilities, and the
13 things can be taken out of context perhaps with a little
14 higher vulnerability than some of the other reports. But
15 it also is an obvious plus from the study approach.

16 And I think you will have gained this from
17 hearing these gentlemen speak on my left this morning.
18 And that is that the process we used, the multi-
19 discipline, multi-functional, multi-segment process that
20 we used in developing this report, we all believe -- when
21 you sat in the study groups, we all believe will serve the
22 industry very, very well in the future because we're all
23 customers of one another.

24 And I think that the leadership group, which
25 includes the leadership of important segments of the gas

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1 industry in the United States, have learned to talk to
2 each other more effectively and, more importantly, to
3 listen. And none of us we found, particularly from the
4 focus groups, has a corner on all the good ideas.

5 So with that, I would really like to have some
6 brief comments as far as their broad perspectives from my
7 government co-chairman, Jim Randolph, and from Gene Tracy
8 and Ken Lay.

9 We're going to pass from Jim Randolph. How
10 about Ken and Gene?

11 MR. LAY: I think, again, Frank has hit most
12 of the points that I would like to have made and has done
13 it very crisply, as he said.

14 I think just two points, real quickly, of
15 course. One, I'm tremendously impressed with both the
16 quantity and the quality on the input of this study. And
17 like you, I've been involved in a lot of various studies,
18 industry studies, government studies. But the people that
19 jumped into this one really put everything into it and I
20 think the work product reflects that.

21 We'd like to thank all of the people that
22 have, in fact, made that contribution.

23 Secondly, I think the importance of the study
24 again comes back to the role that the NPC plays. And that
25 is, for the first time, at least on the natural gas side

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1 of the equation, we do have a study that has had input
2 from all segments of the industry as well as from a number
3 of academics, a number of industry consultants.

4 And as Frank said, on a system basis we've
5 come up with the various forecasts, and also, maybe most
6 importantly, the estimate of the potential resource base.
7 And to have the whole industry embrace numbers on the
8 resource base under certain economic and technological
9 assumptions I think is extremely important as we continue
10 to hear so much about trying to expand the use of natural
11 gas in our economy, both for environmental and economic
12 reasons.

13 I would say one final thing about that, as we
14 get into the questions. Having participated in this
15 process over the last year-and-a-half or so, for those of
16 you in the audience who have not participated, I expect
17 we've heard about as much from various people that think
18 the assumptions are too conservative as we have from
19 people who think they're too optimistic.

20 So I expect we're getting somewhere close to
21 the mid-range within our industry. So there have been
22 some things intentionally done on technological advances
23 after the year 2010, for example, which many people
24 believe are pretty conservative. And, of course, there
25 have been some things done on non-conventional resources

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1 that people think maybe are too optimistic.

2 But I think it is extremely important that all
3 segments of our industry have bought into this study. And
4 I agree with Frank. I think the key now is to implement
5 the recommendations in the study and to educate our
6 various constituencies on what this study means, and to
7 try to do that on an industry-wide basis through our
8 various trade associations, including the Natural Gas
9 Council; and really make sure that this study has the
10 impact that I think it can have on policymaking in this
11 town and the various state capitols and elsewhere.

12 Thank you.

13 MR. TRACY: One thing nice about going last is
14 that most of the good comments have already been made by
15 previous speakers.

16 I would like to make one observation with
17 regard to this whole two-year process, and that is that I
18 think it's beholden on us, all segments of this industry,
19 to make the industry a more homogenous industry.

20 We have seen in all of the meetings that we've
21 had segments of the industry come with their own
22 parrticular persuasion as to why things can't be done.
23 And I think in this process we've worked together to find
24 ways that things can be done.

25 I would hope that this study is a nucleus for

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1 continuation of the cooperation between the segments of
2 the industry and government and regulators that we can
3 make this thing work, because I think it's more than just
4 a selfish interest on each of our own segments. I think
5 what we're talking about is an energy base and source that
6 can help this country maintain its leadership in the
7 world.

8 And I think that's important, as we review
9 this report, that we work together to make this thing
10 work. And I think that's been the value of all of the
11 participation that's been involved in this to date, and I
12 hope we can continue that.

13 MR. RICHARDSON: We are running very tight on
14 time because we want to get to the Admiral's comments.
15 But with that, if there are questions or suggestions or
16 comments on the report, we'd be happy to take them on. I
17 will be happy to act as traffic cop for the expert team on
18 my left and the Chairman's team on my right.

19 Thank you.

20 CHAIRMAN HUNT: It is ironic that we are
21 moving so quickly at this stage, given two years and all
22 the meetings and all the debate and all the discussion
23 that has occurred. But I think it has all occurred prior
24 to today.

25 Question has been called, motion has been

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1 made. All in favor of approving the report of the
2 Committee on Natural Gas as presented, please signify by
3 saying "aye."

4 (Chorus of "aye's")

5 CHAIRMAN HUNT: Opposed?

6 (No response)

7 CHAIRMAN HUNT: Motion carries. Let's give
8 all of these people a terrific round of applause.

9 (Applause)

10 CHAIRMAN HUNT: I had some comments which I'm
11 going to save until after the Admiral has left, about the
12 report and, again, the people involved.

13 It is now my pleasure to introduce Admiral
14 Watkins. I'm going to avoid the trap of going through his
15 resume, which is exceptionally extensive, both in the
16 military and in the private sector.

17 I was at a dinner last night, and during the
18 course of one hour there were probably three individuals
19 in different contexts who made the comment that Admiral
20 Watkins is the best Secretary that the Department of
21 Energy has ever had.

22 He is a man who did not grow up in our
23 industry, but when he was appointed Secretary of Energy he
24 took his responsibilities very seriously. And he
25 approached every new issue with openness and a willingness

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1 to listen to the views of others, even if those views
2 would be in conflict with the conventional wisdom.

3 There were several times that the Admiral and
4 I had the opportunity to visit about the NPC. He stated
5 very clearly that he did not want the NPC to try to tell
6 him what decisions to make, but, rather, he hoped that the
7 NPC could serve as a vehicle by which he could observe
8 discussion and debate between informed and knowledgeable
9 parties. He would make his own decisions at a later time,
10 but the debate he could listen to would be very helpful.

11 He also hoped that the membership of the NPC
12 could serve as a source of commentary and input when he
13 had the occasion to call upon it, as was the case with
14 Desert Storm and a couple of other cases.

15 This is just my own personal, individual
16 opinion, but I honestly believe that if all of our
17 government officials possessed the same level of
18 intellectual honesty as Admiral Watkins, many of the
19 problems facing our society today would not be there.

20 Ladies and gentlemen, it is my very real
21 pleasure to introduce to you the Secretary of Energy,
22 Admiral Watkins.

23 (Applause)

24 ADMIRAL WATKINS: Thank you very much, Ray,
25 for the kind comments.

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1 It is a great honor to come before you again
2 on this last occasion that we have to chat with each
3 other, and have presented today two such in-depth and
4 important studies that you have run in response to my
5 request.

6 What Ray says about our relationship with NPC
7 I think is absolutely right on the mark. It has been
8 enhanced over the time I've been there. We've gotten
9 together and stream-lined some of our planning processes
10 to make these events as meaningful as possible. It's a
11 large group.

12 The effort put in on these studies not only in
13 the human resources, but the material resources you put
14 into it is impressive. And again, I think few people in
15 the country recognize the importance of these
16 public/private partnerships that go on, and how much more
17 important they'll become to maintain a competitive nation
18 in the days ahead.

19 I can assure you that the gas study will be
20 distributed to every member of Congress in the very near
21 future, to all governors, to the public utility
22 commissioners, to a whole host of other addressees that
23 need to see this.

24 It is extremely timely with the advent of the
25 new Administration now in transition in taking over who

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1 have embraced natural gas, who have found it, as we have
2 found it, to be a very important energy product that has
3 universal support.

4 And, therefore, this study becomes a
5 tremendous base on which we can build the second edition
6 of the national energy strategy, which is due out on the
7 1st of April, 1993. And I can assure you it will be a key
8 element of the bibliography and a key element of the new
9 strategy.

10 We did not have the benefit of this study and
11 there was confusion about the reserve base that we have in
12 the country, confusion about the integration, the variety
13 of entities that we need to effect, including the
14 regulatory reform that was necessary both at the Federal
15 Government and the state level.

16 All of these things now are coming together.
17 And so the quality of the report is clear, I think, from
18 today's presentation.

19 Also, the refinery study, as Ray indicated, we
20 chatted during the presentation by Ken Derr, and we see
21 that study as another major milestone in trying to clean
22 up one of the most complicated industries that we've got
23 in the country.

24 There's a lot of fear and apprehension upon
25 those of us concerned about energy that we haven't put our

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1 arms around this issue. And I think by Spring you'll have
2 your arms around it, and you can just listen to the depth
3 and breadth of the study, the quality of the analysis
4 going into it. We could not have done that at the Federal
5 Government level at all. And that's why the NPC is so
6 important.

7 So I see the NPC as growing in its
8 effectiveness, and I hope that my successor will see the
9 same import. And I'm going to rely on Ray's quiet way,
10 his manner coming in and rubber-hosing the Secretary.
11 Please do that to my successor. Get in there with your
12 principals from this Council and make sure he understands,
13 he or she understands the importance of this Council to
14 the Secretary.

15 In this industry that has been so often
16 maligned and so improperly so by the American people, who
17 are so illiterate in so many areas, the education process
18 is extremely important to the credibility of this
19 industry. And, therefore, we're all engaged in that, and
20 the continuous consensus building approach to energy,
21 environment, science and economics has to continue.

22 I would say there is one message that I would
23 leave. What I got out of this morning was more than just
24 the quality of the output of the gas study and the
25 refinery situation report that we got.

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1 But when you listen to the individuals who
2 played in the game, the over 200 contributors here, and
3 the investment that went into the study, you're talking
4 about source and supply people; you're talking about
5 demand and distribution; you're talking about transmission
6 and storage; and you're talking about regulation and
7 policy issues, including environmental policy issues.

8 So what you've done here in this study, and
9 what is evident also in the refinery study, you're
10 bringing together the same entities that we had to bring
11 together to build a national energy strategy and to build
12 the National Energy Policy Act of 1992.

13 The worst thing we can do is to consider these
14 to be one-time photographs and drop the issue. That will
15 destroy our ability to maintain a dynamic national energy
16 policy system. And so, therefore, I am encouraging you,
17 as I have the National Coal Council, as I have the
18 renewable energy councils that we have, the environmental
19 councils and others, that somehow we have to find a better
20 mechanism from this point on, now that we do have an
21 integrated and comprehensive national energy strategy,
22 underpinned by legislation, to disallow the fractionation
23 and piecemealing of that strategy in the future.

24 You're going to have to help fight for that.
25 And that means you're going to have become a partner with

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1 the other energy producers, with what I call legitimate
2 environmentalists, with the science and technology, and
3 with the economics of this situation; so we can keep it
4 together.

5 Because if it's unbalanced and it goes one way
6 or the other because of local constituency interests, then
7 it's going to go down the tubes. The nation will not be
8 well served by a self-interested approach to energy again.
9 And I include Capitol Hill members and leadership up there
10 who have a bias, so biased a system prior to this time,
11 and continue to try to bias it.

12 Unless you come together as a phalanx, as the
13 energy industry of the country and try to pull together
14 with all other entities at some point to horizontally
15 integrate, it's not going to work.

16 So I really do believe we have another
17 challenge. And I would hope that this body, which is a
18 very competent and special body, would come together with
19 some of the other entities and figure out how do we keep
20 this multi-disciplinary, homogenous approach that we've
21 just heard about that is coming out of this study alone.
22 How do we keep this going from now on? How do we continue
23 working these entities on a continuing basis? How do we
24 work this out organizationally and institutionally to do
25 it?

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1 We have to maintain our vertical orientation
2 always, and I understand that. But every once in awhile
3 we have to cut across lines. I'm doing that, for example,
4 in research. We don't have the resources to do all the
5 research we'd like to do, so I had to bring a body
6 together, called the Secretary of Energy's Advisory Board,
7 and bring them together to horizontally integrate with the
8 limited resources what I'm going to do between basic
9 energy sciences and, say, high energy physics.

10 And so these are very important times that we
11 look across lines and at some point allow us to be more
12 homogenous as a nation. And energy is at the heart, as
13 you know, of the economy of the nation.

14 So it is a time, I think, and were I to stay
15 on, the kind of comments I will give my transition team
16 and my successor, is I would be pushing for an entire
17 reorganization in the Federal Government regarding energy.
18 Energy and foreign policy, energy and international
19 economics, energy and national economics, energy and the
20 environment.

21 We for the first time in the Department of
22 Energy are signing memoranda of understanding -- this may
23 seem strange to you -- between government agencies and
24 DOE. We've never done that. We have just signed a
25 memorandum of understanding between the Environmental

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1 Protection Agency and ourselves in research and
2 technology.

3 They were amazed to see what we were doing in
4 our national laboratories. We did not know what they were
5 doing at their laboratories. Same with Agriculture. Bio-
6 mass is becoming a very important commodity, as is
7 biotechnology for economics that we're heavily involved in
8 in our national labs. And we're also in bio-remediation,
9 which is of great interest to the oil and gas industry.

10 These things are now being done in partnership
11 with other federal agencies. That partnership, plus our
12 partnership with you in the private sector becomes the
13 real powerhouse to leverage our dollars to really
14 accomplish a competitive nation.

15 So I really do believe we're at the heart
16 through our national technology initiative and the other
17 things we're doing of springing forward in a new way,
18 providing we don't slip back into the old way of doing
19 business.

20 So I ask you to figure out a way to grasp this
21 moment when we have integrated so many people together to
22 come and support each other, to give us an overwhelming
23 passage of a bill that I think has been one of the best
24 domestic policy bills this country has ever produced.
25 It's very complex. It's not well known by the American

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1 people because it's filled with all kinds of weird things,
2 like RCRA and those other funny things.

3 But we have to convert what the American
4 consumer wants. We have to listen to the consumer here,
5 not the regulator. The regulator should be implementing
6 good policy. We have not had good policy until today.
7 And so now I think we've given the regulators something to
8 regulate, instead of in a de facto sense setting national
9 policy in energy itself. And that's where we had allowed
10 this thing to go awry.

11 So we're all intervenors now, with each other
12 in a positive way. And I hope that's the lesson that
13 we've learned out of the building of the energy strategy
14 and the development of these kinds of comprehensive
15 studies that cut across so many lines and so many interest
16 lines in the nation.

17 So that's the thing that's going to make the
18 country ring in the future. And next year if we don't
19 pull together, I guarantee you that things like the
20 Resource Conservation Recovery Act, the RCRA Act on waste,
21 such as the Endangered Species Act, which is to be re-
22 authorized next year, such as the definitions for
23 wetlands, which will be addressed without any question in
24 the forthcoming session of Congress; all of these issues
25 are critical to you.

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1 We aren't even asked to debate those. DOE is
2 not a part of that. It goes to another committee. This
3 raises serious questions on Capitol Hill: are the
4 committees organized up there to even deal with these
5 issues in a comprehensive, integrated, homogenous, multi-
6 disciplined way? The answer is no.

7 There's self-interest, self-greedy, local
8 constituent-oriented, vertically-oriented systems, and we
9 go to something like 50 committees on the Hill.
10 Jurisdiction is over us for 50 committees. Probably about
11 23 of those are very active. We had 12 referral
12 committees that were approved for the national energy
13 strategy and 15 wanted to get into the act, including the
14 Postal Committee.

15 Now, I don't get some of that stuff. But I
16 know this. The nation is not going to go forward unless
17 there is a group of people on Capitol Hill that also agree
18 that we cut across all of these lines in energy,
19 environment, economics, science and technology, and we
20 can't be piecemealed out to committees who have local
21 interests and steal our dollars from gas research and put
22 it into pork.

23 So you have to come again to the help of the
24 federal agencies in trying to carry messages through to
25 Capitol Hill, along with the other entities. And we grew.

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1 The first year on the national energy strategy we did not
2 come together, and we had odd bedfellows, all against.

3 The second year we came together. And we were
4 torn apart up there by a couple of issues, one of which
5 would have affected the auto industry and destroyed it in
6 our opinion. The other issue turned out to be non-
7 environmental, but was so emotional we could not deal with
8 it, on the Arctic National Wildlife Refuge.

9 That is a very, very important issue, not only
10 for its own self but its symbology. And if we're for
11 natural gas, which we are here, and if we can't drill,
12 it's a problem.

13 So I think that these issues then have to be
14 faced. They are real issues. Such things as the de
15 minimus level for nuclear radiation at Yucca Mountain,
16 which will be the future of the nuclear energy industry,
17 is a very important issue to you. Not because it's
18 nuclear, because it's the first time that the Congress has
19 told the National Academy of Sciences to tell us what the
20 real health risk is; tell us what the real environmental
21 risk is; tell us what the real safety risk is, instead of
22 best technology available and these other simplistic
23 approaches to how much is clean.

24 What is clean-up? Clean-up to what level? If
25 you believe that anything is anthropogenic, man-generated,

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1 has to be cleaned up, we have a real problem on our hands.
2 Does it really have to be cleaned up to pre-human levels?
3 Not in my opinion. But somebody has to say that,
4 otherwise the regulators will go bananas, and they will
5 continue to have best technology available and these other
6 things.

7 And we're at the point now that we can read
8 one atom per cubic meter. Is that what we want? Do we
9 want to clean up to that because it was man-generated?
10 Now, come on. Why did we get fined? Why did 38 oil and
11 gas independents get fined one morning because all of a
12 sudden they were putting stuff in a ply that they'd been
13 putting in for 40 years, and one morning they woke up and
14 were fined four-and-a-half million dollars because it was
15 waters of the United States.

16 Who declared it was waters of the United
17 States? Well, some local regulator didn't like what he
18 saw. Now, we can't do that in this country. We had to
19 stop that and the President had to get in the act and
20 terminate it.

21 So it's this approach to education of the
22 American public, and if you can figure out how to do it
23 with the press, fine; that's another issue. But if you
24 can do it with the American public, we might have enough
25 support to make this country ring in this decade and

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1 really turn into something that's not only special because
2 it's always been special, but double-special. Because we
3 have the number one role in leadership, and we have to
4 understand that energy, national economy, and
5 international economy is related.

6 Global climate change is your issue in this
7 room. Ozone layer depletion is one of your issues. These
8 are all international issues now and we have to deal with
9 them in a new way. And that means we have to be together
10 as the total energy industry, talking in a more balanced,
11 unified, homogenous, complementary way.

12 So that's my message after four years of being
13 in this valley of tears. It's been a good relationship
14 with you all. We've energized the NPC. Keep it
15 energized, keep bringing in rubber hose experts like Ray
16 to energize the Secretary into making sure that he's a
17 player, he or she is a player in this NPC.

18 And I think if we do that, then we're going to
19 see the industry regain its credibility that it deserves,
20 continue to be a major player in the national economy,
21 which it is and should continue to be. And I'm talking
22 about oil and gas.

23 You may have to call the oil and industry
24 something else like gas and oil industry. And if you have
25 to do that, do it. You vote it in, just like we voted in

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1 this one today. You may have to do that for image
2 purposes until we can get our feet on the ground, and show
3 the American people that this industry is fundamental to
4 the good things that we are doing worldwide, like going
5 into Somalia and all the other things we have to do.

6 We cannot do it without the energy resources
7 in a balanced way, and that includes this great oil and
8 gas industry that has brought this nation, or certainly
9 helped bring this nation to be number one in the world.
10 And we've got to stay there.

11 So we need your continuing support in the
12 system between the Federal Government, the private sector,
13 academia, governors, and so forth, very complex
14 interaction between all of us to come together and talk as
15 a unified approach to making this country not only greater
16 than it is, but continue for the next century to be number
17 one in the world.

18 So this industry is key to that. Thank you
19 for all the support you've given me. Thank you for these
20 great studies. I'll assure you that certainly this
21 natural gas study is going to get a lot of publicity, and
22 I think it will get a lot of support from the new
23 Administration who loves gas.

24 So good luck, God bless you, and thanks for
25 all the help.

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1 (Applause)

2 CHAIRMAN HUNT: Thank you very much, Admiral.
3 Your comments, as always, are very insightful, right on
4 the point, and we all should take them to heart.

5 As they walk out the door, I would just like
6 to say that there have been a number of changes that have
7 occurred over the last four years in the NPC, both with
8 our structure and with our procedures. And they could not
9 have occurred without the vision and the total support of
10 Admiral Watkins, Henson Moore, when he was Deputy, Linda
11 Stunz, Deputy now, Jim Randolph and others within the DOE.

12 Lod Cook and I have over the last four years
13 enjoyed a very good working relationship with the DOE.
14 And I think that many of the benefits of the changes which
15 again have proven so important are being seen in meetings
16 like this today.

17 The next item is to receive the report of the
18 NPC's Finance Committee. The committee met yesterday to
19 review the financial status of the Council. And John
20 Hall, who chairs the committee, took the opportunity to
21 injure his knee and is now recovering from surgery back
22 home. So I chaired the meeting in John's behalf, and he's
23 in good spirits and good shape and will be back soon.

24 We reviewed a draft of calendar year 1992
25 expenditures and contributions to date, and I'm pleased to

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1 report that, although it was small, we will end the year
2 with a modest positive variance to our budget. This is
3 thanks to your response to our request for supplemental
4 contributions last year and to vigilant attention to cost
5 and expenditures by both the study committees and the
6 staff of the NPC.

7 We then discussed a budget for calendar year
8 1993, and as you have heard this morning, with the
9 exception of the final printing, the natural gas study has
10 been completed. The refining study is still going at full
11 speed and it should be completed in the first half of
12 1993.

13 With any new administration comes a degree of
14 uncertainty of what will be asked of the Council in coming
15 months. And for budgeting purposes we have assumed a
16 return to our more normal level of activity which usually
17 has one study cranking up while another one is coming
18 down. We're assuming that will be the case as we go
19 forward, as opposed to the somewhat frantic pace of the
20 last couple of years when we had two studies moving
21 concurrently.

22 The Finance Committee, therefore, recommends
23 for calendar year 1993 a budget in the amount of
24 \$2,932,000. This provides funds to complete the refining
25 study and to undertake one additional study of moderate

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1 size should it be requested by the new Administration.

2 The last item on the agenda of the Finance
3 Committee was the level of recommended member
4 contributions. As you may recall, in our last meeting you
5 approved the use of the Council's contingency fund as well
6 as the supplemental contributions to fund this year's
7 budget, which was again expanded by the cost of the two
8 studies, natural gas and refining, running concurrently.

9 As a result, we have just about depleted our
10 contingency fund and the Finance Committee feels it is
11 prudent to begin to rebuild it. Therefore, we recommend
12 a contribution level of \$3,542,000, which is a little bit
13 less than the total that was contributed in 1992, which
14 will provide operating funds for the recommended calendar
15 year 1993 budget and a restoration by the end of 1993 of
16 a three-month operating reserve for the contingency fund.

17 Further, the Finance Committee recommends that
18 a commitment be made today that in the 1994 budget the
19 contingency fund be further replenished, so that by the
20 end of 1994 it will be restored to a level approximating
21 six months of operating costs.

22 That completes the report of the Finance
23 Committee. I don't know if it's proper for me to make a
24 motion, but is there a motion that the Council approve a
25 calendar year 1993 budget in the amount of \$2,932,000, and

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1 that the level of member contributions for 1993 be
2 \$3,542,000?

3 Motion made. Seconded. Any discussion?

4 All in favor signify by saying "aye."

5 (Chorus of "aye's")

6 CHAIRMAN HUNT: Motion carries. Thank you.

7 The next item is to receive and vote upon a
8 memorial resolution to Jim Glanville. This will be
9 delivered by Collis Chandler, who all of us know and who
10 is also a former chairman of the National Petroleum
11 Council. Collis?

12 MR. CHANDLER: Thank you, Ray.

13 The members of the National Petroleum Council
14 were deeply saddened by the death of their distinguished
15 colleague James W. Glanville on September 16, 1992. Jim
16 was a frequent house guest of mine and a good, good
17 friend, as he was of many of you. He was often fond of
18 saying his clients were his friends.

19 He was born in Cooper, Texas, a son of a
20 professor at SMU who headed up the History Department, and
21 in that environment he grew up in Dallas. He began his
22 career on Wall Street in 1959. Prior to that, he worked
23 for Humble as a reservoir and operations engineer.

24 As an investment banker, Jim was a partner and
25 managing director at Lehman Brothers until 1978, when he

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1 joined Lazard Freres. Jim played a large role in the
2 growth of Lazard Freres where he served as general partner
3 until his death.

4 He was an alumnus of Rice University where he
5 graduated in 1944 with a degree in chemical engineering,
6 distinguished. He served as a governor of Rice. He was
7 also a visiting professor of investment banking at the
8 time of his death. He was a past trustee of California
9 Institute of Technology. He held two degrees from Cal
10 Tech, and acted as chairman of its Capital Campaign and
11 Finance Committee.

12 Jim served as a member of the National
13 Petroleum Council for 12 years. He was an active
14 participant on several studies and administrative
15 committees, including at the time of his death the Natural
16 Gas Committee and the coordinating subcommittee.

17 Therefore, with sincere admiration for his
18 achievements and contributions to the industry and to the
19 Council and with a sense of great loss, be it resolved on
20 the 17th day of December, 1992, that the sympathy of the
21 members of the National Petroleum Council be extended to
22 his wife, Nancy, and his four sons, John of Pasadena;
23 Charles of London; Thomas of Houston; and Robert of
24 Moscow.

25 It is further resolved that this resolution be

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1 entered upon the permanent record of the Council and that
2 an appropriate copy thereof be delivered to his family as
3 a remembrance of the Council's esteemed and fond
4 appreciation.

5 CHAIRMAN HUNT: Thank you, Collis.

6 A motion has been made. Is there a second?

7 (Motion seconded.)

8 CHAIRMAN HUNT: Is there any discussion? All
9 in favor signify by saying "aye"?

10 (Chorus of "aye's")

11 CHAIRMAN HUNT: Opposed?

12 (No response)

13 CHAIRMAN HUNT: Motion carries.

14 Would everyone please stand for a moment in
15 silence?

16 (Moment of silence)

17 CHAIRMAN HUNT: Thank you. Thank you very
18 much, Collis.

19 We now will move to other business. I would
20 like to make a couple of comments in this section and then
21 Jim Randolph and Dalton Woods have both asked to make a
22 couple of comments, and then we will open it to the floor.

23 First, as I referenced earlier as the Admiral
24 was walking out the door, there have been a number of
25 changes both in structure and procedure that really

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1 commenced under Lod Cook's regime and then were continued
2 the last couple of years. The purpose of these changes
3 has been to hopefully improve the ability of the NPC to
4 respond to Department of Energy initiatives and also to
5 make our meetings more efficient and informative to our
6 membership.

7 And, again, it was really ironic that we did
8 not end up with a lot of discussion before the vote on the
9 gas study. There was a time pressure for the Admiral.
10 But I will say that the number of meetings, as it was
11 referenced, that led up to this report were extensive.
12 The attendance at the meetings was very high. There were
13 several meetings where they had to bring in extra chairs,
14 that type of thing.

15 I tell you, I sat at the all-day meeting, the
16 last meeting of the full committee, and there was
17 discussion, debate, argument, friendly, all the things
18 that you want in terms of sharing diverse opinions. And
19 if there ever was a report that came together the way it
20 should, it was this report.

21 Anyway, with respect to especially the conduct
22 of these meetings, I would like to again request that if
23 anyone has any suggestions or constructive criticisms as
24 to how these meetings can be improved further, please
25 share them with Marshall and me.

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1 Second, I'd like to make a very short report
2 on the first meeting of the Chairman's Coordinating
3 Committee which the Council membership authorized at our
4 last meeting.

5 The Chairman's Coordinating Committee did meet
6 on October 21 with Admiral Watkins and senior members of
7 the DOE staff. We discussed the status of the then-
8 current studies, and the gas study was still going at that
9 time. We discussed the structure of today's presentation
10 of the gas study, and we also discussed other areas in
11 which the NPC might possibly be of future assistance to
12 the DOE in other study areas.

13 And, again, just one person's opinion, but I
14 personally believe that the quality of the work product of
15 both study committees was enhanced by this Committee's
16 discussions as well as the effectiveness of today's
17 presentation.

18 I had a note that Jim would like to make a
19 couple of comments, and then, Dalton, we'll call on you.
20 Jim?

21 MR. RANDOLPH: The Admiral wanted me to
22 mention to you that he has left copies of a draft proposal
23 where he's seeking for oil companies and gas companies to
24 join with a couple of the national labs, Los Alamos and
25 Lawrence Livermore, in trying to apply some of the smarts

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1 that they have gleaned over the years in the defense
2 weapons programs to the oil and gas industry.

3 And it's a very substantial commitment that he
4 is making towards contributing toward funding that and
5 looking for in-kind contributions primarily from the oil
6 and gas companies. These will be available somewhere
7 around the back. They'll be outside. They're outside.
8 So pick these up and look it over. If you're interested,
9 contact those laboratories.

10 And, lastly, on behalf of the Department, I
11 want to compliment those that are present and those who
12 are absent who have produced truly a very professional and
13 monumental study, especially the gas study. It will rank
14 as one of the most thorough and valuable efforts, I think,
15 of the National Petroleum Council for all times.

16 It displays artful writing and presentation
17 and is distinguished by thorough and logical support for
18 its conclusions and recommendations. It provides valuable
19 insight and recommendations not only for the gas industry
20 but clearly for federal and state governments.

21 We have gotten advance intelligence about many
22 of your recommendations. And in trying to make up our
23 budget request for '94, which we'll be leaving to the
24 incoming Administration, we have attempted to align these
25 programs to be responsive to your recommendations.

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1 There are two areas that we have signified
2 that will require additional discussion and deliberation
3 by the incoming Administration, and you're talking about
4 research and development, but in the fine print you're
5 really talking about research, development, demonstration
6 and commercialization. We believe that our current
7 programs and those of the FERC-approved GRI budget is
8 generally responsive to the first three, the research, the
9 development and demonstration.

10 The question of commercialization, however, is
11 a much broader issue because that is one that the coal
12 industry is also seeking, as they have now demonstrated
13 the first of a kind of many different plant; but they find
14 that the second cost is still greater than, you might say,
15 the "nth" cost. And so that's an issue which is a broader
16 one, which, if applied, would probably have to stretch the
17 blanket over both industries. And that is a much more
18 costly thing.

19 The other issue that we've signaled is that
20 you are proposing a much more responsive leadership role
21 for the DOE in trying to harmonize various state
22 regulatory policies. This is a very fine line and it
23 requires a great deal more deliberation, I think, to
24 really articulate and define exactly what leadership role
25 DOE could and should play.

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1 Since this is also my swan song, it's been a
2 pleasure working with all of you. Thank you very much.
3 Ray?

4 CHAIRMAN HUNT: Thank you, Jim. It's been a
5 real pleasure working with you.

6 Dalton Woods and I visited just before the
7 meeting started this morning, and Dalton asked if he could
8 make some comments. Dalton?

9 MR. WOODS: As a result of the policy of Ray
10 Hunt and Admiral Watkins who opened up this Council to
11 input from the membership, I requested of Admiral Watkins
12 that a study be made of the oil resource base of the
13 United States for the reason that both Congress and the
14 press have a tendency to feel that there is no more oil to
15 be found in the United States and, therefore, why should
16 we do anything to assist or help the industry in any
17 manner.

18 The Admiral was quick to pick up on this
19 initiative and he directed Jim Randolph to carry through
20 with this study. And thanks to the fact that Jim Randolph
21 and his assistant, Don Juckett, are industry oriented, he
22 picked up this initiative quickly.

23 From the industry side, we are very much
24 indebted to Bob Gunn. Bob, who is past president of the
25 American Association of Petroleum Geologists, was quick to

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1 pick up on the organization, and it was through Bob's
2 effort that we involved Dr. Ray Fisher, the Director and
3 Chairman of the Bureau of Economic Geology, and Economic
4 Resources for the University of Texas at Austin.

5 Dr. Fisher was responsible for this study that
6 was referred to about natural gas that was also done by
7 the Department of Energy. Dr. Fisher organized all of the
8 best minds in the United States from the Bureau of Land
9 Management, Department of Interior, United States
10 Geological Survey, the Department of Energy, Energy
11 Information Agency, and the American Association of
12 Petroleum Geologists, the Association of Petroleum
13 Engineers, and a number of other research groups.

14 This study was completed, and the Department
15 of Energy has issued a final report showing the oil
16 resource base of the United States similar to what you
17 have just seen on the gas resource base.

18 And, Mr. Chairman, because this initiative
19 originated here in the Petroleum Council, I move that the
20 National Petroleum Council distribute copies of this
21 Department of Energy report to all of its membership.

22 CHAIRMAN HUNT: Dalton and I had talked about
23 this study and there had been a lot of interest in it.

24 Dalton, there's some subtleties here. Since
25 this was not technically a National Petroleum Council

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1 study, there's a fine line for us to walk.

2 With your permission, I think it would be more
3 appropriate just to make the statement that we will
4 distribute the study to all the NPC members, but not make
5 that a formal resolution. I think it will accomplish the
6 same thing that you and I talked about at the beginning,
7 with your concurrence.

8 MR. WOODS: Yes, sir. That's fine.

9 CHAIRMAN HUNT: Great. We will plan on doing
10 that. And, technically, I presume the motion is
11 withdrawn, but you all can expect a report in your in-box.
12 It won't be as thick as the gas study report, but I think
13 you will find it very interesting.

14 Does any other Council member have anything
15 they would like to bring before the group at this time?

16 Yes, sir? Would you please identify yourself
17 for the record?

18 AUDIENCE MEMBER: (inaudible) I am
19 increasingly worried about the Balkanization of energy
20 interests. And my question is, is it worthwhile
21 (inaudible) form a coordinating group with a new defining
22 (inaudible) we could add our combine horsepower and
23 address Congress and the public (inaudible) that we
24 believe are important to the future of this country as far
25 as energy use and control and regulations are concerned.

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1 I think there are some areas where we find
2 common ground: environmentalists, alternative energy
3 sources, and bring that horsepower (inaudible).

4 CHAIRMAN HUNT: I appreciate that very much.
5 Your point is an exceptionally valid one and it is one
6 that has had some discussion; in fact, quite a bit of
7 discussion.

8 There is a very -- well, let me back up. It's
9 always important that we remember when we meet as the
10 National Petroleum Council who we are and what we are.

11 We are an advisory group to the Secretary of
12 Energy and that is our only reason for existence, and to
13 help the Department of Energy and the Secretary of Energy.
14 The way we help them is to share with them our opinion and
15 advice and studies and anything else he asks of us.

16 In terms of what is done with the work product
17 of the NPC, the Secretary is the person who needs to make
18 that decision. It is part of the public record, and to
19 the degree that any other group from any area wishes to
20 utilize this data it is in the public domain.

21 So that in specific answer to your question,
22 certainly I think that all of us would concur that one of
23 the greatest problems facing the energy industry has been
24 fragmentation and people working at cross-purposes. And
25 that's one of the major conclusions of the gas study, that

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1 much more cooperation will bring forth very positive
2 results.

3 But I think it would need to be the Secretary
4 mandating any actions by this organization to interface
5 with any other organization.

6 Now, having said that, Jim, do you have any
7 comments on that? Marshall, do you?

8 Okay. But the point you make is an
9 exceptionally valid one and is one that the energy
10 industry must accomplish in some form, and the country
11 badly needs.

12 Thank you. Are there any other comments from
13 members of the National Petroleum Council?

14 Are there any members of the public here with
15 us today who have any comments they would like to make or
16 matters to bring before this Committee before we adjourn?
17 And I again will remind members of the media that we will
18 have a press conference here ten minutes after we conclude
19 this meeting.

20 Hearing none, I would like to again thank all
21 the people who have worked so hard on the gas study. I'd
22 like to thank the chair, the co-chairs, Jim Randolph; the
23 government co-chair, vice chairs; all the members on the
24 panel; all the people who are not here today. They just
25 did a fantastic job. Let's give them one more round of

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1 applause.

2 (Applause)

3 CHAIRMAN HUNT: We appreciate very much your
4 attendance and we stand adjourned. The press conference
5 will start in ten minutes.

6 (Whereupon, at 11:20 a.m., the meeting was
7 adjourned.)

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CERTIFICATE

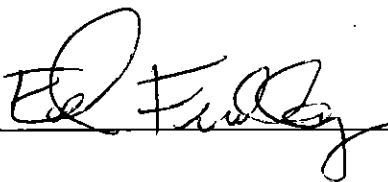
This is to certify that the foregoing transcript in the matter of
Meeting,

Before National Petroleum Council,

Held on December 17, 1992,

In the location of Washington, DC,

represents the full and complete proceedings of the aforementioned
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